

WHAT IS CLAIMED IS:

1. A display device, comprising:
a semiconductor substrate;
an array of control elements on the semiconductor substrate; and
an array of reflective pixel electrodes arranged in rows and columns,
the array of pixel electrodes is stacked over the array of control elements so that each
of the control elements controls a state of reflection of a corresponding one of the
pixel electrodes,

wherein the control elements are arranged (i) in a first direction that
makes an angle greater than zero and smaller than 90° with a direction of the rows,
and (ii) in a second direction perpendicular to the first direction.

2. The display device according to claim 1, wherein the state of reflection
is controlled by one of (i) controlling alignment of a liquid-crystal layer disposed over
the corresponding one of the pixel electrodes, and (ii) controlling an angle of the
corresponding one of the pixel electrodes.

3. The display device according to claim 1, further comprising a converter
that (i) receives a video signal including a series of image data in an order
corresponding to the rows and columns of the pixel electrodes, and (ii) converts the
order of the series of image data in the received video signal in accordance with
correspondences between rows and columns of the array of control elements and the
rows and columns of the pixel electrodes.

4. The display device according to claim 3, wherein the array of control
elements includes first drive lines extending in the first direction and second drive
lines extending in the second direction.

5. The display device according to claim 1, wherein the array of control
elements includes row drive lines extending in a direction of the rows of the array of
the pixel electrodes, and column drive lines extending in a direction of the columns of
the array of the pixel electrodes.

6. A display device, comprising:
a semiconductor substrate;
an array of control elements arranged in rows and columns formed on
the semiconductor substrate; and
an array of reflective pixel electrodes arranged in rows and columns
with a first pitch and a second pitch, the array of pixel electrodes is stacked over the

array of control elements so that each of the control elements controls a state of reflection of a corresponding one of the pixel electrodes:

wherein the control elements are arranged in same directions as the rows and columns of the pixel electrodes with (i) a third pitch different from the first pitch, (ii) a fourth pitch different from the second pitch, and (iii) a product of the first and the second pitches equal to a product of the third and the fourth pitches.

7. The display device according to claim 6, wherein the state of reflection is controlled by (i) one of controlling an alignment of a liquid-crystal layer disposed over the corresponding one of the pixel electrodes, and (ii) controlling an angle of the corresponding one of the pixel electrodes.

8. A method of making a display device, comprising:

forming an array of control elements on the semiconductor substrate;

and

forming an array of reflective pixel electrodes arranged in rows and columns, the array of pixel electrodes being stacked over the array of control elements so that each of the control elements controls a state of reflection of a corresponding one of the pixel electrodes,

wherein the control elements are arranged (i) in a first direction that makes an angle greater than zero and smaller than 90° with a direction of the rows, and (ii) in a second direction perpendicular to the first direction.

9. A method of making a display device, comprising:

forming an array of control elements arranged in rows and columns on a semiconductor substrate; and

forming an array of reflective pixel electrodes arranged in rows and columns with a first pitch and a second pitch, the array of pixel electrodes being stacked over the array of control elements so that each of the control elements controls a state of reflection of a corresponding one of the pixel electrodes:

wherein the control elements are arranged in same directions as the rows and columns of the pixel electrodes with (i) a third pitch different from the first pitch, (ii) a fourth pitch different from the second pitch, and (iii) a product of the first and the second pitches equal to a product of the third and the fourth pitches.